

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A crystal analyzing apparatus comprising:

an ion beam emitting unit configured to emit an ion beam onto a sample to sequentially form a plurality of sections of said sample;

an electron beam emitting unit configured to emit an electron beam to each of said plurality of sections;

a detecting unit configured to detect, with respect to each of said plurality of sections, an electron backscatter diffraction pattern produced from said sample as a result of the emission of said electron beam;

a data processing unit configured to construct three-dimensional data about a crystal orientation distribution of said sample by stacking a plurality of two dimensional data about said crystal orientation of said sample obtained with respect to said plurality of sections on the basis of results detected by said detecting unit; and

an analyzing unit configured to define an arbitrary two-dimensional section in said three-dimensional data and performing a crystal analysis about said arbitrary two-dimensional section.

Claim 2 (Original): The crystal analyzing apparatus according to claim 1, wherein said crystal analysis is one of preferred orientation analysis, grain size analysis, grain boundary characteristic analysis,  $\Sigma$ -value distribution analysis, and phase distribution analysis.

Claim 3 (Currently Amended): A crystal analyzing apparatus comprising:

- an ion beam emitting unit configured to emit an ion beam onto a sample to sequentially form a plurality of sections of said sample;
- an electron beam emitting unit configured to emit an electron beam to each of said plurality of sections;
- a detecting unit configured to detect with respect to each of said plurality of sections, an electron backscatter diffraction pattern produced from said sample as a result of the emission of said electron beam;
- a data processing unit configured to construct three-dimensional data about a crystal orientation distribution of said sample by stacking a plurality of two dimensional data about said crystal orientation of said sample obtained with respect to said plurality of sections on the basis of results detected by said detecting unit; and
- an analyzing unit configured to extract an arbitrary three-dimensional region from said three-dimensional data and performing a crystal analysis about said arbitrary three-dimensional region.

Claim 4 (Original): The crystal analyzing apparatus according to claim 3, wherein said crystal analysis is one of preferred orientation analysis, grain size analysis, grain boundary characteristic analysis,  $\Sigma$ -value distribution analysis, and phase distribution analysis.